



Questions and Answers: Critical Habitat Designation for the Arkansas River Shiner

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Q: What is the Arkansas River shiner?

A: The Arkansas River shiner is a small, robust minnow with a small, dorsally flattened head, rounded snout, and small subterminal mouth. Dorsal coloration tends to be light tan, with silvery sides gradually grading to white on the belly. There is usually a small, dark chevron located at the base of the caudal fin. The Arkansas River Basin population of the Arkansas River shiner was listed as threatened in 1998.

Q: What is Arkansas River shiner habitat?

A: The Arkansas River shiner historically inhabited the main channels of wide, shallow, sandy-bottomed rivers and larger streams of the Arkansas River basin. Adults are uncommon in quiet pools or backwaters, and almost never occur in tributaries having deep water and bottoms of mud or stone. Like most fishes occurring in the highly variable environments of plains streams, they use a broad range of microhabitat features. Recurrent natural flooding is important in maintaining their habitat and also helps them maintain a competitive edge over invading non-native aquatic species. The species needs more than 130 miles of unimpounded, flowing water to successfully complete its reproductive cycle.

Q: What is critical habitat?

A: Critical habitat is a term in the Endangered Species Act for areas designated by the Service that have features essential for the conservation of a threatened or endangered species and which may require special management considerations. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. It does not allow government or public access to private lands. Federal agencies that undertake, fund or permit activities that may affect critical habitat are required to consult with the Service to ensure such actions do not adversely modify or destroy designated critical habitat. The designation does not affect purely private or state actions on private or state lands, or require lands to be positively managed for conservation.

Q: How does critical habitat affect my private land?

A: Consultation requirements triggered by designation of critical habitat do not apply to private actions on private lands that do not require a Federal permit or are not Federally funded or implemented. Critical habitat designations only apply to Federal lands or federally funded or permitted activities on non-federal lands.

Q: Does a 'critical habitat' designation mean an area is considered a wildlife refuge or sanctuary?

A: No. Critical habitat was not designated to stop development or to establish a nature preserve. Critical habitat designation identifies areas that are important to the conservation of Federally listed threatened or endangered species. Section 7 of the ESA requires Federal agencies to consult with the Fish and Wildlife Service on any of their actions that may affect areas designated as critical habitat. The Service can then recommend ways to minimize or compensate for any adverse effects.

Q: What has the Service designated as critical habitat for the Arkansas River shiner?

A: The Service has designated as critical habitat a total of approximately 532 linear miles of 2 river reaches, including 300 feet of adjacent riparian areas measured laterally from each bank. The areas that have been determined to be eligible for designation as critical habitat for the conservation of the Arkansas River shiner include portions of the Canadian River (often referred to as the South Canadian River) in New Mexico, Texas, and Oklahoma, the Beaver/North Canadian River of Oklahoma, the Cimarron River in Kansas and Oklahoma, and the Arkansas River in Kansas.

In developing this proposal, the Service evaluated those lands determined to be eligible for designation as critical habitat for the conservation of the Arkansas River shiner to ascertain if any specific areas would be appropriate for exclusion from the final critical habitat designation pursuant to section 4(b)(2) of the ESA. The Service determined that the benefits of excluding the Beaver/North Canadian River in Oklahoma (Unit 2) and the Arkansas River in Kansas (Unit 4) from the final critical habitat for the Arkansas River shiner outweigh the benefits of their inclusion. In addition, we have excluded all previously proposed critical habitat in Unit 1a of the Canadian River in New Mexico and Texas and a portion of Unit 1b in Texas and Oklahoma under authority of section 4(b)(2) of the Act.

The final critical habitat designation includes portions of the Canadian River in Oklahoma and the Cimarron River in Kansas and Oklahoma.

Specific critical habitat areas are identified and mapped in the October 6, 2004, *Federal Register* Proposed Rule.

Q: How does the Service determine what areas to designate?

A: The Service considers the physical and biological features that aid the survival, conservation and recovery of a species. These include but are not limited to:

- space for individual and population growth, and for normal behavior;
- cover, food, water, and other nutritional/physiological requirements; and
- sites for breeding and rearing offspring.

Such habitats have been determined to be eligible for designation as critical habitat for the conservation of the species and often may require special management considerations or protection. The Service also determined where significant threats exist and, therefore, which areas would benefit most from protection provided by critical habitat designation.

Q: What habitat considerations has the Service evaluated in the determination to designate critical habitat for the Arkansas River shiner?

A: Critical habitat should be in river reaches of sufficient size to provide appropriate habitat so that

Arkansas River shiner populations are large enough to be self-sustaining over time, despite fluctuations in habitat conditions. These reaches must exhibit sufficient connectivity so that the Arkansas River shiner can move between areas, at least during certain flows or seasons, and permit successful development of eggs, larvae, and juveniles of the species.

Critical habitat areas by definition require "special management considerations and protections." A relatively intact riparian zone, along with periodic flooding in a relatively natural pattern, is important for long-term survival and recovery of the Arkansas River shiner. Among other factors, the riparian zone and associated vegetation provide space for natural flooding patterns and latitude for necessary natural channel adjustments to maintain appropriate channel morphology and geometry. They also provide nutrient input and buffering from sediment and pollutants, store water for slow release to maintain base flows, and provide protected side channel and backwater habitats for larval and juvenile Arkansas River shiners.

Q: Has the Service designated all historically occupied habitat as Arkansas River shiner critical habitat?

A: No. It has only designated a portion of the historic habitat that the Service considers eligible for the conservation and recovery of the species and in need of special management or protection. The 1998 listing rule for the Arkansas River shiner conservatively estimated that at least 2,450 miles of habitat within the species' range was occupied historically. This final designation involves approximately 25 percent of that total and likely is a conservative estimate considering this figure does not take into account probable occupancy of smaller tributaries in the Arkansas River Basin. In addition, we are excluding the Canadian River in New Mexico and Texas, Beaver/North Canadian River in Oklahoma, a portion of the Canadian River in Oklahoma, and the Arkansas River in Kansas and Oklahoma from the final designation. Considering the amount of historically occupied habitat that occurred in the smaller tributaries, the amount being considered for this final critical habitat designation is about 25 per cent of the historic total. Although the designation encompasses about half of the historic range of the species, the Service determined that conservation within these areas can secure the long-term survival and recovery of this species.

Q: Do all listed species have critical habitat designated for them?

A: No. The Service does not designate critical habitat if doing so would jeopardize the species or make it susceptible to collection. To qualify as critical habitat, an area must contain the physical and biological elements in need of special management or protection. Any final critical habitat decision will be the result of reevaluation of the habitat needs of the Arkansas River shiner, a National Environmental Policy Act review, a compliance with Executive Orders, public and industry comments, and local and regional economic analyses.

Q: Where does the Arkansas River shiner occur today?

A: Current known distribution for Arkansas River shiner is almost entirely restricted to about 508 miles of the Canadian/South Canadian River in New Mexico, Texas and Oklahoma. Additionally, a small population still persists in the Cimarron River, based on the recent collection of eight individuals in 2004. A remnant population also may persist in the Beaver/North Canadian River of Oklahoma, based on collection of only four individuals since 1990.

A non-native, introduced population occurs in the Pecos River in New Mexico; however, this population is not protected under the Endangered Species Act. Critical habitat is not being

considered for the Arkansas River shiner in the Pecos River.

Q: What was the historic range of the Arkansas River shiner?

A: The Arkansas River shiner was known to inhabit most of the major rivers in the Arkansas River Basin, including several of the larger and smaller tributaries in Arkansas, Kansas, New Mexico, and Texas. Arkansas River shiners were fairly common throughout most of this system, with the possible exception of Arkansas. The species is no longer believed to occur in Arkansas.

Q: Has a recovery plan been prepared for the Arkansas River shiner?

A: No. A plan has not been developed due to funding and personnel constraints related largely to unanticipated litigation support activities; however, the Service intends to begin preparing a draft recovery plan soon. Service policy encourages active participation from the scientific community, local, State, and Federal agencies, Tribal governments, organizations, landowners and other interested parties in the development and implementation of recovery plans. Local community support and the cooperation of private landowners is essential to fully conserve and recover listed species, and we will work closely with stakeholders in the management and recovery of the Arkansas River shiner to ensure that the concerns of local governments, citizens, and others are considered.

The recovery plan will contain reasonable actions to conserve and recover listed species. It may also address measures specifically mentioned during the comment period. Implementation of those measures contained in recovery plans is not mandatory.

Q: Of what lasting value is the Arkansas River shiner?

A: Congress passed the Endangered Species Act as a means of safeguarding fish and wildlife resources for the public good. Congress found that fish, wildlife, and plants are intrinsically valuable to the Nation and its people for reasons of aesthetic, economic, ecological, educational, historical, recreational, and scientific value. Our natural resources are valuable indicators of the health of the environment. Rare, threatened, and endangered species are symptoms of an unhealthy environment, and their compromised viability may indicate that ecosystems are in danger from some of the same threats.

Q: Has critical habitat for the Arkansas River Basin population of the Arkansas River shiner been designated before?

A: Yes. The final rule designating critical habitat for the Arkansas River Basin population of the Arkansas River shiner was published in the *Federal Register* on April 4, 2001. However, per a September 2003 court order directing the Service to analyze more fully the economic impacts of critical habitat designation (New Mexico Cattle Growers Association et al. v. Norton, Civ. No. 02-461 LH/RHS D.N.M), critical habitat was vacated and the Service was ordered to complete a proposed rulemaking to redesignate critical habitat by September 30, 2004.

Q: In the final rule listing the Arkansas River Basin population of the Arkansas River shiner, critical habitat was not designated for the species, why was it designated in 2001?

A: Per a settlement agreement approved by the court on February 16, 2000, (Center for Biological Diversity v. Bruce Babbitt, et al., C99-3202 SC (N.D. Cal.)), the Service agreed to reconsider the question of whether critical habitat would be prudent; and, if designation of critical habitat was found

to be prudent, we would subsequently propose designation of critical habitat for the Arkansas River Basin population of the Arkansas River shiner by June 23, 2000. Upon further consideration, the Service determined that designation of critical habitat could be beneficial to the conservation and recovery of the species.

Q: Will livestock grazing be affected by critical habitat designation?

A: While the Service may recommend fencing of certain riparian zones to avoid potential water quality degradation, implementation or construction would be voluntary. Best grazing management practices are compatible with many natural resource objectives and likely do not degrade the riparian zone. Excluding livestock from riparian zones is but one means of conserving water quality. The Service and other Federal and State agencies offer programs to assist ranchers and other landowners in implementing measures for habitat restoration and improvement. These programs provide funding and technical assistance to interested landowners wanting to restore degraded areas through such activities as fencing to facilitate rotational grazing systems and exclude livestock from streams, providing alternative water sources, and planting filter strips – measures that many landowners may not otherwise be able to afford.

Q: Will designation of critical habitat force regulation of surface or groundwater?

A: No. Authority or jurisdiction over the regulation of surface or groundwater belongs to various State agencies. The Service supports and encourages the States in their efforts to increase water use efficiency and improve conservation of surface and groundwater. Voluntary conservation of water resources is believed to be more effective in recovery efforts for the shiner than additional restrictions on withdrawals. Groundwater management districts in the Texas High Plains have aggressively encouraged implementation of water-saving technologies that have minimized annual depletion. Conservation of the Ogallala aquifer, and the resulting benefits to stream flow within the Arkansas River Basin, cannot occur without the full participation of the States. Management of invasive plant species such as salt cedar also can result in the conservation of stream flow and shiner habitat.

Q: Why was the Arkansas River basin population of the Arkansas River shiner listed as threatened species?

A: Survival of the species is threatened by habitat destruction and modification from stream dewatering or depletion due to diversion of surface water and groundwater pumping, construction of impoundments, and water quality degradation. Competition with the non-indigenous Red River shiner *Notropis bairdi* also contributed to diminished distribution and abundance in the Cimarron River. Incidental capture of the Arkansas River shiner during pursuit of commercial bait fish species also may contribute to reduced population sizes. Drought and other natural factors also threaten the existence of the species.

Q: What can a landowner do to enhance habitat for the Arkansas River shiner?

A: The Service provides assistance to landowners who want to improve or restore habitat on their property through the Partners for Fish and Wildlife Program as well as other Service programs. Other State and Federal agencies also offer financial and technical assistance programs to landowners for habitat improvement projects. Restoration of prairie stream characteristics, adequate flows and management of invasive plant and animal species are key to providing and maintaining suitable shiner habitat.

Q: Are economic effects considered during critical habitat designation?

A: The Endangered Species Act (ESA) requires the Service to designate critical habitat on the basis of the best scientific and commercial data available, after taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. The Service may exclude areas from critical habitat designation when the benefits of exclusion outweigh the benefits of including the areas within critical habitat, provided the exclusion will not result in extinction of the species.

Q: How did the Service analyze the economic effects associated with the shiner and critical habitat designation?

A: The Circuit Court of Appeals directed the Service that when deciding which areas to designate as critical habitat, the economic analysis should include “co-extensive” effects. Those include all economic effects resulting from conserving the species, the species’ listing (threatened) status, previous and future mitigation costs, and the implementation of critical habitat. The economic analysis evaluates the co-extensive effects of shiner conservation. The environmental assessment (under the National Environmental Policy Act) focuses on the natural and human environment that may result from critical habitat designation alone.

Q: What are the economic effects and who is experiencing them?

A: The economic analysis forecasted cost impacts from the conservation of the shiner ranging from \$15 to \$33 million annually. Concentrated animal feeding operations, oil and gas production, and water management activities are expected to experience the greatest economic impacts related to shiner conservation activities.

Q: When will a critical habitat designation become effective?

A: Critical habitat designation that would trigger Endangered Species Act section 7 review of Federal activities would become effective 30 days following our final determination, which published on October 13, 2005.